CLAIMS

What is claimed is:

1. A method of forming a catalytic converter, the method comprising:

providing a catalytic converter having a central portion and an end portion, wherein the central portion defines a horizontal central axis;

rotating the catalytic converter around the central axis;

placing a roller perpendicular to the central axis;

keeping the roller perpendicular to the central axis;

and forming the end portion by moving the roller in a transverse direction with respect to the central axis.

2. The method of claim 1, further comprising the step of moving the roller in a parallel direction with respect to the central axis.

3. The method of claim 1, wherein the end portion defines an axis at an angle with respect to the central axis of the catalytic converter.

4. The method of claim 3, wherein the angle between the axis of the end portion and the central axis is in the range of 30° to 60°.

5. The method of claim 1, wherein moving the roller in a transverse direction with respect to the central comprises:

dividing the end portion into multiple imaginary planes perpendicular to the central axis;

forming a contour corresponding to the multiple imaginary planes; and

programming the roller to follow the contour.

6. The method of claim 1, further comprising rotating the roller around an axis parallel to the central axis.

7. The method of claim 1, wherein the step of placing the roller comprises the step of contacting a surface of the catalytic converter such that moving the roller in the transverse direction reduces the diameter of the catalytic converter at the surface.

8. The method of claim 1, wherein forming the end portion further comprises cutting an end part of the end portion such that the end part is angled with respect to a vertical axis of the catalytic converter.

9. A method of forming an end portion of a catalytic converter, the method comprising:

providing a catalytic converter having a central portion and an end portion such that the central portion defines a horizontal central axis;

rotating the catalytic converter around the central axis;

placing a roller perpendicular to the central axis;

keeping the roller perpendicular to the central axis; and

moving the roller in a transverse direction with respect to the central axis, wherein the end portion defines an axis at an angle with respect to the central axis.

10. The method of claim 9, further comprising the step of moving the roller in a parallel direction with respect to the central axis.

11. The method of claim 9, wherein the angle between the axis of the end portion and the central axis is in the range of 30° to 60°.

12. The method of claim 9, wherein moving the roller in a transverse direction with respect to the central comprises:

dividing the end portion into multiple imaginary planes perpendicular to the central axis;

forming a contour corresponding to the multiple imaginary planes; and

programming the roller to follow the contour.

13. The method of claim 9, rotating the roller around an axis perpendicular to the central axis.

14. The method of claim 9, wherein the step of placing the roller comprises contacting a surface of the catalytic converter such that moving the roller in the transverse direction reduces the diameter of the catalytic converter at the surface.

15. The method of claim 9, wherein forming the end portion further comprises cutting an end part of said end portion such that the end part is angled with respect to a vertical axis of the catalytic converter.

16. A method of forming an oblique end portion of a catalytic converter, the method comprising:

providing a catalytic converter having a central portion and an end portion such that the central portion defines a horizontal central axis;

rotating the catalytic converter around the central axis;

placing one roller perpendicular to the central axis such that the roller contacts a surface of the end portion;

keeping the roller perpendicular to the central axis;

moving the roller in a transverse direction with respect to the central axis;

moving the roller in a transverse direction with respect to the central axis, such that the end portion defines an axis at an angle with respect to the central axis; and

reducing the diameter of the end portion in the surface .

17. The method of Claim 16, wherein the angle between the axis of the end portion and the central axis is in the range of 30° to 60°.

18. The method of Claim 16, wherein moving the at least one roller in a transverse direction with respect to the central comprises:

dividing the end portion into multiple imaginary planes perpendicular to the central axis;

forming a contour corresponding to the multiple imaginary planes; and

programming the roller to follow the contour.

19. The method of claim 16, rotating the roller around an axis perpendicular to the central axis.

20. The method of claim 16, wherein forming the end portion further comprises cutting an end part of the end portion such that the end part is angled with respect to a vertical axis of the catalytic converter.